

## Product datasheet for **RG215976**

### Myosin light chain kinase (MYLK) (NM\_053025) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Myosin light chain kinase (MYLK) (NM_053025) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Myosin light chain kinase
Synonyms:	AAT7; KRP; MLCK; MLCK1; MLCK108; MLCK210; MMIHS; MMIHS1; MSTP083; MYLK1; smMLCK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG215976 representing NM_053025 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGGGATGTGAAGCTGGTTGCCTCGTCACACATTTCCAAAACCTCCCTCAGTGTGGATCCCTCAAGAG  
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AGCCACCGCCAAGTTCGAAGGGCGGGTCCGGGGTTACCCAGAGCCCCAGGTGACATGGCACAGAAACGGG  
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AACGCCCAAGGCCAGCTGTCCTGTAGCTGGACCCTCCAAGTGAAAGGCTTGCCGTGATGGAGGTGGCCC  
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 AG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG215976 representing NM\_053025  
 Red=Cloning site Green=Tags(s)

MGDVKLVASSHISKTSLSVDPSRVDSMPLTEAPAFILPPRNLCIKEGATAKFEGRVRYPEPQVTWHRNG  
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 GDRFSAPAVETRPSIWGECPPKFATKLRV VVKEGQMGRFSCKITGRPQPQVTLKGNVPLQPSARVSVS  
 EKNGMQVLEIHGVNQDDVGYYTCLV VNGSGKASMSAELSIQGLDSANRSFVRET KATNSDVRKEVTNVIS  
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 DLKVM DGSQV TMTVQVSGNPPPEVIWLHNGNEIQESEDHFHEQRGTQHSLCIQEVFPEDTGTYTCEAWNS  
 AGEVRTQAVLTVQEPHDGTQPFISKPRSVTASLGQSVLISCAIAGDPFPTVHWLRD GKALCKD TGHFV  
 LQNE DVF TLVLKKVQPHAGQYEILLKNRVGECSCQVSLMLQNSSARALPRGREPASCEDLGGGVGADG  
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 GNAKPDENLKSASKEELKKDVKN DVNCKRGHAGTTDNEKRSESQGTAPAFKQKLQDVHVAEGKLLLQCQ  
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 PASENTKAPEMKSRRPKSSLPPVLGTESDATVKKKPAKTPPKAAMPPIIQFPEDQKVRAGESVELFGK  
 VTGTQPI TCTWMKFRKQIQESEHMKVENSENGSKLTIL AARQEHCGCYTLLVENKLGSRQAQVNLTVVDK  
 PDPPAGTPCASDIRSSSLTL SWYGSSYDGGSAVQSYSIEIWDSANKTWKELATCRSTSFNVQDLLPDHEY  
 KFRVRAINVYGTSEPSQESELTTVGEKPEEPKDEVEVSDDDEKEPEVDYRTVTINTEQKVSDFYDIEERL  
 GSGKFGQVFRLVEKKTRK VWAGFFKAYS AKEKENIRQEI SIMNCLHHPKLVQCVD AFE EKANIVM VLEI  
 VSGGELFERI IDEDFELTERECIKYMRQISEGVEYIHKQGI VHLDLKPENIMCVNKTGTRIKLIDFGLAR  
 RLENAGSLKVLFGTPEFVAPEVINYEPIGYATDMWSIGVICYILV SGLSPFMGDNDNETLANVTSATWDF  
 DDEAFDEISDDAKDFISNLLKKDMKNRLDCTQCLQHPWLMKDTKNMEAKKLSKDRMKKYMARRKWKGTGN  
 AVRAIGRLSSMAMISGLSGRKSSTGSP TSPLNAEKLESEEDVSQAFLEAVAEKPHVKPYFSKTI RDLEV  
 VEGSAARFDCKIEGYPDPEVVWFKDDQSIRESRHFQIDYDEDGNC SLIISDVCGDDDAKYCTKAVNSLGE  
 ATCTAELIVETMEEGEGEGEEEE

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_053025

**ORF Size:** 5742 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

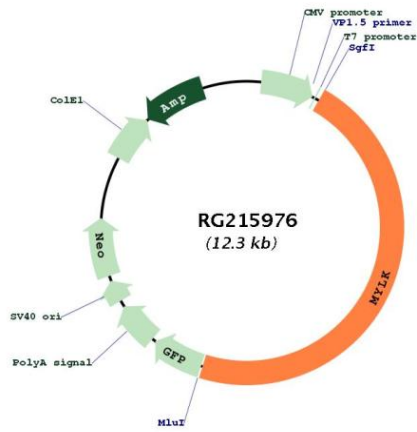
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_053025.4</a>
<b>RefSeq Size:</b>	7852 bp
<b>RefSeq ORF:</b>	5745 bp
<b>Locus ID:</b>	4638
<b>UniProt ID:</b>	<a href="#">Q15746</a>
<b>Cytogenetics:</b>	3q21.1
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Calcium signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
<b>Gene Summary:</b>	<p>This gene, a muscle member of the immunoglobulin gene superfamily, encodes myosin light chain kinase which is a calcium/calmodulin dependent enzyme. This kinase phosphorylates myosin regulatory light chains to facilitate myosin interaction with actin filaments to produce contractile activity. This gene encodes both smooth muscle and nonmuscle isoforms. In addition, using a separate promoter in an intron in the 3' region, it encodes telokin, a small protein identical in sequence to the C-terminus of myosin light chain kinase, that is independently expressed in smooth muscle and functions to stabilize unphosphorylated myosin filaments. A pseudogene is located on the p arm of chromosome 3. Four transcript variants that produce four isoforms of the calcium/calmodulin dependent enzyme have been identified as well as two transcripts that produce two isoforms of telokin. Additional variants have been identified but lack full length transcripts. [provided by RefSeq, Jul 2008]</p>

Product images:



Circular map for RG215976